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U. S. Department of Agriculture
Agricultural Research Service
Soil and Water Conservation Research Branch
Beltsville, Maryland



QUICK SOIL TESTS

The publications of this Branch dealing with rapid soil tests were issued several years ago. Most features of these publications are applicable today. It must be appreciated, however, that active interest in this subject has continued to be widespread and that progress has been made in the direction of greater usefulness of such tests in certain respects. Techniques have been moderately improved and background for local interpretation has, in some localities, been greatly improved. However, a statement frequently made several years ago is still applicable today: "Quick chemical soil tests are easy to make, but difficult to interpret."

Tests for soil acidity are easy to make and are usually relatively easy to interpret in terms of need for lime when a moderate amount of local experience is at hand.

A list of addresses of companies making simple inexpensive outfits for soil acidity tests (pH) follows:

Hellige Trueg, Hellige, Inc., 3702 Northern Blvd., Long Island City, New York
Soil-Tex, Edwards Chemical Company, Box 2742, Cleveland 11, Ohio
La Motte Chemical Products Company, McCormick Bldg., Baltimore, Maryland

Some students, and occasionally gardeners, wish to experiment with rapid chemical soil tests, using the portable kits sold for this purpose. For the information of this group a list of addresses of companies making portable soil test sets is given below. This list is not a complete one but includes those companies that have come to the attention of the writer during recent months:

La Motte Chemical Products Co., McCormick Bldg., Baltimore, Maryland
Hellige, Inc., 3702 Northern Blvd., Long Island City, New York
Sudbury Soil Testing Laboratory, South Sudbury, Massachusetts
Urbana Laboratories, Urbana, Illinois
Edwards Chemical Company, Box 2742, Cleveland 11, Ohio

There are those who wish to set up relatively simple laboratory equipment for making soil tests of personal interest. Also teachers in secondary schools frequently wish to use simple chemical tests as a part of special interest programs. Several of the State Experiment Stations have issued bulletins that contain information concerning chemicals used for soil tests together with procedures for making these tests. A group of these bulletins is listed below:

Soil Testing - A Practical System of Soil Diagnosis
C. K. Spurway, Mich. State College Agr. Expt. Sta.
Tech. Bull. 132, 32 pp. (1933).

- The Use of Rapid Chemical Tests on Soils and Plants as Aids in Determining Fertilizer Needs. S. D. Connor and R. R. Frazer, Ind. Agr. Expt. Sta. Cir. 204, 16 pp. (1934).
- Truck Crop Investigations - Rapid Chemical Tests for Coastal Plain Soils. J. B. Hester, J. M. Blume, and Florence A. Shelton, Virginia Truck Expt. Sta. Bull. 95, 50 pp. (1937)
- Rapid Soil Tests for Estimating the Fertility Needs of Missouri Soils, L. D. Baver and F. H. Brumer, Univ. of Missouri Agr. Expt. Sta. Bull. 404, 16 pp. (1939)
- Soil Testing - Operation, Interpretation, and Application, F. G. Merkle, The Penn. State College, School of Agr. and Expt. Sta. Bull. 398, 34 pp. (1940).
- Chemical Soil Diagnosis by the Universal Soil Testing System (A revision of Bull. 392), by M. P. Morgan, Conn. Agr. Expt. Sta. Bull. 450, 67 pp. (1941). Supplement issued Sept. 1945.

Soil Testing Services by Governmental Agencies and by Private Institutions

Several of the States provide some soil testing service through a State laboratory, a regional laboratory or through the offices of County Agricultural Agents. Among the state institutions that operate from a central laboratory are:

University of Maryland, College Park
University of Illinois, Urbana
Pennsylvania State College, State College
Connecticut Agricultural Experiment Station, New Haven
Iowa State College, Ames

The above list is not designed to be a complete one. It is always best for anyone interested to write to his own State Experiment Station for information before sending a soil sample to the institution for examination. Each State Experiment Station has an extensive background of experience relating to crop productivity, fertilizer practice and certain phases of soil chemistry. Each of these institutions is in better position to interpret results of local tests than is any one at a distance operating on a basis of chemical information alone.

Some of the fertilizer companies, canning companies and perhaps other commercial agencies offer certain soil testing services for the benefit of clients.

In certain parts of the country where intensive agriculture is practiced, a few private parties undertake to offer agricultural advisory service, based in part upon data obtained from soil tests. Such services usually involve visits to the orchards or gardens under consideration.

Listing of any company, any agency, or products does not constitute an endorsement by the Department of Agriculture, nor is it implied that the same services or products may not be obtained from other sources.

